

From owner-qrp-l@netcom.com Fri Mar 10 18:26:35 1995  
Date: Fri, 10 Mar 1995 14:29:10 -0330  
Message-Id: <199503101759.0AA07978@public.compuser.net>  
From: rgobrick@public.compuser.net (Robert J. Gobrick)  
Subject: Brass Racer Cover

Chuck,

Had some idle time on my hands and I started reading old QRP-L Email (ho-hum..) Anyway I noticed you mentioned that your son was going to make a square base for your new Vibroflex Brass Racer so you can use your old plastic dust cover.

If you are interested (this may ruin the family "bonding" that has already started - hi) but I believe Vibroflex has a triangular plexiglass dust cover for the Brass Racer. At least, put it this way, I have a plexiglass cover on my Racer and I am pretty sure it is from Vibroflex (by the way my Brass Racer is the "original" made by Scotia, from Northern California before Vibroflex bought out the design and fabrication rights).

Plexiglass dust covers are a must on all my Keys (Bencher and Brass Racer) since they keep crud out of the contacts etc.

72 Bob VO1DRB/WA6ERB

PS: I like the simplicity of the magnetic tension of the Brass Racer over the Bencher - makes for real "squeeze" keying.

From owner-qrp-l@netcom.com Fri Mar 10 19:56:03 1995  
Message-Id: <199503102141.AA20238@zia.aoc.nrao.edu>  
Date: Fri, 10 Mar 1995 14:41:57 -0700  
From: Paul Harden <pharden@aoc.nrao.edu>  
Subject: Data Sheet Correction

I will be reissuing the DATA SHEET: CAPACITORS #2 in a moment. Noticed a really dumb mistake in getting Radial vs. Axial leads backwards on the illustrations. Sorry.  
AXIAL leads on caps are like most resistors are made  
RADIAL leads are like most disk ceramics, etc.

The old ENTER key got me again.  
Paul NA5N

From owner-qrp-l@netcom.com Fri Mar 10 22:24:20 1995  
Message-Id: <199503101621.AA07406@zia.aoc.nrao.edu>  
Date: Fri, 10 Mar 1995 09:21:27 -0700  
From: Paul Harden <pharden@aoc.nrao.edu>

Subject: DATA SHEET: CAPACITORS #1

DATA SHEET de NA5N: CAPACITORS (part 1 of 2)

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CONTENTS: Brief description of major capacitor types (non-electrolytic)  
Capacitor identification and coding schemes  
Temperature Characteristics

\*\*\*\*\* CAPACITOR TYPES: (non-electrolytic) \*\*\*\*\*

DISK CERAMICS consist of two metallic plates whose area and spacing determines the capacitance, separated with a ceramic film dielectric and housed in an epoxy molding.

- >Advantages: inexpensive, small, high C per unit size
- >Disadvantages: high capacity changes over the temperature range
- >Uses: blocking, coupling, bypassing and energy storage applications
- >Use only NPO (see below) for critical timing or oscillator circuits

MONOLYTHIC/MULTILAYER CERAMICS are very similar to disk ceramics in characteristics and usage. The major difference is monolythics are made from MULTIPLE layers of electrodes and dielectric films to yield high C in small packages. For this reason, they are also called MULTILAYER ceramics. The multilayered element is usually thermally fused to yield a chip ... which by itself is packaged as a surface mounted chip capacitor, or surrounded by an epoxy moulding to form a monolythic capacitor.

- >Advantages: inexpensive, small, high C per unit size
- >Disadvantages: high capacity changes over the temperature range
- >Uses: blocking, coupling, bypassing and energy storage applications
- >Use only NPO (see below) for critical timing or oscillator circuits

POLYESTER FILM capacitors use layers of metal and polyester (mylar) dielectric to make a wide range of capacitances in a small package and have become the standard for DC applications.

- >Advantages: inexpensive, small, high C per unit size
- >Disadvantages: high capacity changes over the temperature range and high loss factors, limiting their use at high frequencies
- >Uses: blocking, coupling, bypassing and energy storage applications

POLYCARBONATE FILM capacitors are layers of metalized film and polycarbonate dielectric for an almost ideal capacitor. These caps have become the standard for Mil-spec film dielectrics.

- >Advantages: high insulation resistance, minimal capacitance change with temperature and low loss (dissipation factor).
- >Disadvantages: costly (3-5 times a disk ceramic)
- >Uses: blocking, coupling, bypassing, frequency discrimination (like RC filters), critical timing circuits, precision oscillator circuits, and operation in high temperature environments.

POLYPROPYLENE FILM capacitors use layers of metal and polypropylene dielectric for low moisture absorption and high breakdown voltages.

>Advantages: Low loss factors and good capacitance stability over the temperature range for high frequency applications, H.V. circuits.

>Disadvantages: Polypropylene has a low dielectric, resulting in larger physical sizes for comparable capacitances and working voltages than most other capacitor types. About twice the cost of disk ceramics.

METAL vs METALIZED FILMS. Capacitor electrodes have traditionally been made from metal alloys. Metalized films use vacuum sputtering techniques to coat a dielectric film with a metal composition to form high C on very thin pieces of film, making for very small sizes. They also tend to be "self healing" in that a high voltage arc will vaporize the metal deposit but will be contained by the dielectric, such that the damage remains localized. An arc will thus not short the capacitor, a common problem with older metal alloy types.

#### \*\*\*\*\* CAPACITOR IDENTIFICATION \*\*\*\*\*

Capacitors are identified by:

1. Direct value marking (i.e. "27pF 35V")
2. EIA Identification Coding (i.e., "104M"= .1uF, 20%)
3. Color coding schemes (pretend this is red-yellow-orange!)

Since color coding schemes are disappearing except for some foreign made tantalums, and direct marking is fairly obvious, only the EIA coding scheme is described.

Typical EIA coded capacitor:      \*\*\*\*\*  
   \* Z5U \* ---> Temperature characteristics  
   \* 224J \* ---> Value and tolerance  
   \*\*\*\*\*  
   |     |

#### TEMPERATURE CHARACTERISTICS:

Min. Temp. (degrees C)	Max. Temp. (degrees C)	Cap. change over temp. range (+/- percentage)			
X=-55C	2=+45C    4=65C	A=1%        B=1.5%      C=2.2%			
Y=-30C	5=+85C    6=+105C	D=3.3%      E=4.7%      F=7.5%			
Z=+10C	7=+125C	P=10%       R=15%       S=20%			
		T=-33%,+22%	U=-56%,+22%		
		V=-82%,+22%			

THEREFORE, a Z5U has an operating temperature range of +10C to +85C and its capacitance changes from -56% (at +10C) to +22% (at 85C).

#### VALUE AND TOLERANCE:

Example: "2 2 4 M"

      --- - -----> Tolerance Codes (+/- %)  
      |     |            F=1pF or 1%    G=2pF or 2% (if C>10pf, then %)

			J=5%	K=10%	L=15%	M=20%	N=30%
Capacitance	Number		P=0%,	+100%	W=-20%,	+40%	
in pF	of zeros		Y=-20%,	+50%	Z=-20%,	+80%	

THEREFORE, a 224M = 22 0000pF = .22uF, 20% tolerance

#### QUICK REFERENCE CHART (Decade values)

1R0 = 1pF	103 = .01uF
100 = 10pF	104 = .1uF
101 = 100pF	105 = 1uF
102 = .001uF	106 = 10uF

1010= Some numbers used on 10 meters!

AFTER ALL OF THAT ... when ordering capacitors, the THREE most common sold by most mail order vendors are

Z5U (Class 1)	.....	+10C to +85C, -56%,+22%
X7R (Class 2)	.....	-55C to +125C, 15% (fairly flat <100C)
and NP0 (Class 3 or C0G)	...	-55C to +150C, <1.5% (ideally flat)

The "N" codes indicate the amount of NEGATIVE capacitance change per degree C.

Thus, NP0 = 0 ppm/deg C  
N150 = -150 ppm/deg C  
N750 = -750 ppm/deg C ... ETC.

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WARNING: The Surgeon General has determined that chewing on orange tantalum "gum drop" capacitors may be hazardous to your health.

GL and have fun, Paul NA5N (pharden@nrao.edu)

From owner-qrp-1@netcom.com Fri Mar 10 19:01:55 1995  
Message-Id: <199503102142.AA20256@zia.aoc.nrao.edu>  
Date: Fri, 10 Mar 1995 14:42:23 -0700  
From: Paul Harden <pharden@aoc.nrao.edu>  
Subject: DATA SHEET: CAPACITORS #2

DATA SHEET de NA5N: CAPACITORS (part 2 of 2) updated 3-95

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Contents: SELECTION AND ORDERING GUIDE  
DEFINITION OF TERMS  
STANDARD VALUES OF CERAMIC/FILM CAPS

\*\*\*\*\* SELECTION GUIDE \*\*\*\*\*  
(PRINCIPAL CHARACTERISTICS OF MAJOR CAPACITOR TYPES)  
To compare characteristics between the major types

-----

CHARACTERISTIC	CERAMICS (X7R's)	POLYESTER FILM	POLY- CARBONATE	POLY- PROPYLENE	TANTALUM
Capacitance range	10p-1uF	.001-15uF	.001-22uF	.001-30uF	.01-1000uF
Typical tolerance	+/-20%	+/-20%	+/-10%	+/-10%	+/-5%
Voltage range	50-200v	50v-15kv	30-600v	100-800v	6-125v
Temperature range	-55,+125	-65,+150	-65,+125	-65,+105	-55,+125
Temp. Coefficient	+/-15%	+/-15%	+/-2%	+/-2%	+/-8%
Insulation Resistance					
for <1uF, Megs/uF	10**4	10**4	10**5	10**7	70M ohms
for >1uF, Megs/uF	10**4	10**3	10**5	10**5	10M ohms
Dissipation factor					
at 1KHz	2.5%	1.0%	0.3%	0.1%	8-24%
Dielectric Absorption	2.5%	0.5%	0.35%	0.05%	na
Stability (1000hrs)	10%	10%	5%	3%	10%

#### Design Considerations:

-Physical size	1 small	4 moderate	5 large	8 largest	3 moderate
-Cost factor	1 low	1 low	3-5 high	2-3 moderate	3 moderate
-Stability	moderate	moderate	excellent	excellent	moderate
-Temp. stability	poor	poor	excellent	excellent	moderate
-Freq. usage	DC-low	DC-low	HF-VHF	HF-VHF	DC-low

REFERENCES: Mallory Electronic Components Catalog  
Sprague Film Capacitor Catalog  
Sprague Capacitor Designers Guide for Engineers  
MuRata/Erie Ceramic Capacitor Catalog

#### DEFINITIONS:

- \*CAPACITANCE TOLERANCE is the maximum deviation between the nominal value (as marked on the capacitor) and the actual capacitance.
- \*WORKING VOLTAGE is the nominal continuous voltage which may be applied without altering any characteristics. (Usually the max. applied volt. without causing arcing/damage is the WVDC x 200%).
- \*TEMPERATURE COEFFICIENT (TC) is the change in capacitance per degree C. A NEGATIVE coefficient is a REDUCTION in C as the temp. INCREASES.
- \*STABILITY (aging) is the change in capacitance over time, usually spec'd at 1000hrs. Aging decreases logarithmically and thus the majority of capacitance change due to aging occurs within the first 1000 hours.
- \*DISSIPATION FACTOR (DF) is the ratio of energy dissipated to the energy stored in the capacitor. The DF is frequency sensitive and is usually specified at a given frequency.
- \*QUALITY FACTOR (Q) is the ratio of energy stored to the energy dissipated, or the inverse of DF. Also specified at a given frequency. (Usually the dissipation factor OR the Q is specified, not both)

\*DIELECTRIC ABSORPTION is the amount of energy dissipated in the capacitor due to losses in the dielectric.

NOTE: The importance of these dissipation factors is what percentage of the power (current and voltage) applied to the capacitor will be LOST due to the dielectric and electrode resistance. This loss is primarily converted into HEAT which will 1) change the capacitance of the device depending upon its temperature coefficient, and 2) can cause damage to the capacitor if its ratings are exceeded. At RF frequencies, the power dissipated is the PEAK-TO-PEAK values, which can be large!

\*INSULATION RESISTANCE (IR) is the DC resistance of the capacitor measured across the terminals. It is a function of the resistance in the metal electrodes and the resistance losses of the dielectric. Thus, the IR will be lower for higher values of C (since it consists of more metal and dielectric materials for higher capacitances).

\*EQUIVALENT SERIES RESISTANCE (ESR) is the sum of the electrode resistance plus the losses due to the dielectric. Dielectric losses are REACTIVE since losses are frequency sensitive. ESR represents the "real" part of the reactance (of the form "R+j").

\*\*\*\*\* STANDARD VALUES OF CERAMIC AND FILM CAPACITORS TO 1uF \*\*\*\*\*

10pF	100pF	.001uF	.01uF	.10uF	Not all standard values are available in certain families of capacitors or for all voltage ratings. Some manufacturers also have additional values.
15	150	.0015	.015	.15	
22	220	.0022	.022	.22	
27	270	.0027	.027	.27	
33	330	.0033	.033	.33	
47pF	470pF	.0047uF	.047uF	.47uF	Always specify the tolerance desired, otherwise the highest (worst) tolerance will be assumed!
56	560	.0056	.056	.56	
68	680	.0068	.068	.68	
75	750	.0075	.075	.75	
82pF	820pF	.0082uF	.082uF	.82uF	
				1.0uF	

-----  
And, just a reminder:  
Common tolerance codes:  
-J 5%  
-K 10%  
-L 15%  
-M 20%

*****	*****
* CAP *	-----* CAP *-----
*****	*****
RADIAL LEADS	AXIAL LEADS
	*****
	* CAP *-----
	*****
	BROKEN LEAD

-----  
GL de Paul NA5N (pharden@nrao.edu)

From owner-qrp-1@netcom.com Fri Mar 10 21:58:31 1995

Message-Id: <199503101621.AA07441@zia.aoc.nrao.edu>

Date: Fri, 10 Mar 1995 09:21:54 -0700

From: Paul Harden <pharden@aoc.nrao.edu>

Subject: DATA SHEET: CAPACITORS #2

DATA SHEET de NA5N: CAPACITORS (part 2 of 2)

-----  
Contents: SELECTION AND ORDERING GUIDE

DEFINITION OF TERMS

STANDARD VALUES OF CERAMIC/FILM CAPS

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-----  
Design Considerations:

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75	750	.0075	.075	.75	
82pF	820pF	.0082uF	.082uF	.82uF	



1.0uF

And, just a reminder:

\*\*\*\*\*  
\* CAP \*  
\*\*\*\*\*  
| |  
| |  
AXIAL LEADS

\*\*\*\*\*  
-----\* CAP \*-----  
\*\*\*\*\*  
RADIAL LEADS

Common tolerance codes:

-J 5%  
-K 10%  
-L 15%  
-M 20%

\*\*\*\*\*  
\* CAP \*-----  
\*\*\*\*\*  
BROKEN LEAD

GL de Paul NA5N (pharden@nrao.edu)

From owner-qrp-l@netcom.com Fri Mar 10 16:57:44 1995

Message-Id: <199503102006.AA17029@zia.aoc.nrao.edu>

Date: Fri, 10 Mar 1995 13:06:48 -0700

From: Paul Harden <pharden@aoc.nrao.edu>

Subject: DATA SHEET: TRANSISTORS #1

DATA SHEETS de NA5N: BIPOLAR TRANSISTORS (Common to QRP rigs)  
(Definitions at bottom)

DEVICE	----->	2N2222	2N2222A	2N3904	2N3906	2N4401	2N4403
TYPE/USAGE		NPN GPA	NPN GPA	NPN LNA	PNP LNA	NPN GPA	PNP GPA
CASE		T0-92	T0-39	T0-92	T0-92	T0-92	T0-92
MAXIMUM RATINGS							
Vce	V	30	40	40	40	40	40
Veb	V	5	6	6	5	6	5
Ic	mA	800	800	200	200	600	600
Pd	W	0.4	0.8	0.6	0.6	0.6	0.6
SMALL SIGNAL CHARACTERISTICS							
Vbe(sat)	V	0.6-1.3	0.6-1.2	0.7-0.9	0.7-0.9	0.7-1.0	0.7-1.0
hfe (gain)		50-300	50-300	100-400	100-400	40-500	60-500
Ft	MHz	250	300	300	250	250	200
Noise Fig.		4dB	4dB	5dB	4dB	--	--
hie (Zin)		2K-8K	2K-8K	1K-10K	2K-12K	1K-15K	1K-15K
Cin	pF	30	25	4	10	30	30
Cout	pF	8	8	8	5	6	9
Tr	nS	25	25	50	50	20	20
Tf	nS	60	60	90	90	30	30

DEVICE -----> MPS918      MPS2222      MPS5179  
                                  (2N2222)      (2N5179)      2N5109

TYPE/USAGE		NPN HFA	NPN GPA	NPN HFA	NPN HFA
CASE		T0-92	T0-92	T0-92	T0-39
MAXIMUM RATINGS					
Vce	V	15	40	12	20
Veb	V	3	6	2.5	3
Ic	mA	50	800	50	400
Pd	W	0.4	0.8	0.2	2.5

#### SMALL SIGNAL CHARACTERISTICS

Vbe(sat) V		1.0 max	0.6-1.2	0.7-1.0	0.7-1.1
hfe (gain)		20-250	50-300	25-300	40-120
Ft	MHz	900	300	2000	1200
Noise Fig.		6dB	4dB	5dB	3 dB
hie (Zin)		na	2K-8K	na	50K
Cin	pF	2	25	2	7
Cout	pF	3	8	3	3
Gve (V. Gain)					11dB
Gpe (Pwr Gain)		15dB		15dB	
Tr/Ton	nS	na	25	na	na
Tf/Toff	nS	na	60	na	na

CASE: T0-92=encapsulated plastic EBC      T0-39=metal can EBC  
 USAGE: GPA=gen. purpose amp. LNA=low noise amp HFA=high freq. amp.  
 Vce= Max. collector-emitter volt.      Veb= Max. emitter-base volt.  
 Ic= Max. collector current      Pd= Max. power dissipation  
 Vbe(sat)=base-emitter saturation voltage, min-max range  
 hfe= gain (frequency dependent)      Ft= max. freq. (where gain=1)  
 hie= approx. input impedance      Cin/Cout= in/out capacitance  
 Tr/Ton= turn-on time      Tf/Toff= turn-off time [for digital switching times]

*** T0-92	B*	T0-39
*** Plastic	*E C*	metal can
(looking at	//	(bottom view)
EBC flat side)	Tab	

REF: Motorola Small Signal Transistors Device Data Book, 1991 ed.

GL de Paul, NA5N (pharden@nrao.edu)

From owner-qrp-l@netcom.com Sat Mar 11 04:57:30 1995

From: PDouglas12@aol.com

Date: Fri, 10 Mar 1995 22:32:28 -0500

Message-Id: <950310211213\_45817424@aol.com>

Subject: Dayton or Bust

OK ladies and gents, here' s my latest updated list of QRP-listers who will be at Dayton and for whom I will be preparing name tag badges. I will repost up to the weekend before we leave for Dayton, and will print then. I have plenty of paper and name tag pins, so you are certainly not too late to be included. Please email me directly rather than annoy everyone with unnecessary messages.

email to pdouglas12@aol.com. Oh, and much to my disappointment, local logistical problems prevent our group's arrival until Friday morning. So find your badges at G-QRP's booth on Friday morning and thereafter:

BILL KELSEY	N8ET	
BOB GOBRICK	WA6ERB	
BOB STAFFORD	N9USD	
BRUCE FLORIP	AA7AR/6	
BRUCE LIFTER	AD4TG	
BRUCE MUSCOLINO	W6TOY/3	
BUCK SWITZER	N8CQA	
BYRON JOHNSON	WA8LCZ	
CHUCK ADAMS	K5FO	
CLARK FISHMAN	WA2UNN	
DAVID FELDMAN	WB0GAZ	
DAVID MEACHAM	W6EMD	
DICK PASCOE	G0BPS	
DICK SZAKONYI	KA3ZOW	
DOUG HENDRICKS	KI6DS	
DUFFY BEISCHEL	WB8NUT	
ERIC SWARTZ	WA6HHQ	
F. "MITCH" MITCHELL	WA4OSR	
GARY DIANA	N2JGU	
HANK KOHL	K8DD	
HOWIE CAHN	WB2CPU	
JASON PENN	N9RPT	
JERRY SY	N3RKD	
JIM CATES	WA6GER	
JIM JOHNS	KA0IQT	
JIM KORTGE	NU8N	
JIM STAFFORD	W4Q0	
JOE EVERHART	N2CX	
JOHN ROUSE	KA3DBN	
KATY SZAKONI	N3SAD	
KEN EVANS	KJ4XR	
MARTY HARTWELL	KD8BJ	
MICHAEL RIOUX	NW1J	
MIKE CZUHAJEWSKI	WA8MCQ	
MIKE FLANNAGAN	KB8NKX	
MONTE "RON" STARK	KU7Y	
NILS YOUNG	WB8IJN	

PAUL VALKO WB8ZJL  
PAULETTE QUICK N9OUH  
PETE MEIER WK8S  
PETER BEEDLOW NN9K  
PRESTON DOUGLAS WJ2V  
PRESTON DOUGLAS WJ2V  
REV. GEORGE DOBBS G3RJV  
RON DOYLE N8VAR  
RON MAJEWSKI WB8RUQ  
STEVE COHEN N3OIE  
STEVE HIDEG N8HSC  
TED ALBERT KF8EE  
TOM FRISZ N9DD  
TOM STAFFORD N9YBC  
WAYNE BURDICK N6KR  
BOB MARLAN KA6NOC/8

I count over 50 of us! Corrections? Flames? WJ2V

From owner-qrp-1@netcom.com Fri Mar 10 16:07:24 1995  
From: "RICHARD HIEBER" <SZ0026@daphne.rrze.uni-erlangen.de>  
Date: Fri, 10 Mar 1995 15:17:48 MET  
Subject: Re: DSP Front End  
Message-Id: <6486E626D@daphne.rrze.uni-erlangen.de>

Hi Gang!

Bob V01DRB/WA6ERB wrote:

> By the way I'm curious is there are any digital addicts out there who  
> operate RTTY/Amtor/Pactor qrp (you know the stuff that's a little faster  
> than Chuck Adams can copy by ear...) I don't have my QRP+ in yet but that  
> will be one of my projects qrp digital.

Jim Cummings, VE3XJ, wrote:

> I just got W9GV's email address late yesterday. I had researched his  
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Greetings from a sunny Bavaria

72

Richard Hieber, DL8MFQ/AA8CP

sz0026@daphne.rrze.uni-erlangen.de

Disclaimer: Just a happy user of the two programs mentioned above,  
nothing more.

From owner-qrp-1@netcom.com Sat Mar 11 02:29:12 1995

From: "RICHARD HIEBER" <SZ0026@daphne.rrze.uni-erlangen.de>

Date: Fri, 10 Mar 1995 15:17:48 MET

Subject: Re: DSP Front End

Message-Id: <6486E626D@daphne.rrze.uni-erlangen.de>

Hi Gang!

Bob V01DRB/WA6ERB wrote:

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From owner-qrp-1@netcom.com Sat Mar 11 04:59:32 1995  
From: "RICHARD HIEBER" <SZ0026@daphne.rrze.uni-erlangen.de>  
Date: Fri, 10 Mar 1995 15:17:48 MET  
Subject: Re: DSP Front End  
Message-Id: <6486E626D@daphne.rrze.uni-erlangen.de>

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From owner-qrp-l@netcom.com Fri Mar 10 16:04:00 1995  
From: "RICHARD HIEBER" <SZ0026@daphne.rrze.uni-erlangen.de>  
Date: Fri, 10 Mar 1995 15:56:15 MET  
Subject: FOX: Sunday, Mar 12, 17m  
Message-Id: <6EC6504D6@daphne.rrze.uni-erlangen.de>

Hi gang,

I received three replies to my inquiry about the end of the fox hunt.  
Jim, AL7FS, proposed an Alaska to Europe Fox hunt. Bob (sorry, dropped  
the call) explained about the atmospheric condx on 40m in summer being  
unfavourable, so no fox hunt.

Chuck, K5FO, mailed the following:  
(Is it impolite to cite from personal email?)

> I initially set the fox hunt up for 22 weeks for two main  
> reasons:  
>  
> 1. We had 11 volunteers x 2 = 22 weeks of fun  
>  
> 2. I chose 40M 'cuz that's what most QRPers have and the  
> sunspots and evening work were conducive to same.  
>  
> Sorry to let it go myself, but I'd think that informal  
> get togethers would work.  
>  
> You can be the first EU station to get on and tell the US  
> guys/gals when and where and we will try to work you. If  
> you want to stimulate interest in 30M, 17M, and 12M, you  
> could pick weekends to let us try and hunt you down.  
>  
> Thanks for the interest and let us know if you are interested  
> in doing the above.

So, on the spur of the moment, my proposal is:

I'll be on 17m next sunday, March 12th, from 15:00 to 16:00 UTC. I'll be  
first on a frequency between 18.110 and 18.130 in SSB and later (second  
half) between 18.080 and 18.090 in CW. My code is a bit rusty, but  
you'll hear yourself :-) I will just put out plain CQ calls (nothing  
fancy like CQ INET), but will keep the contacts short in case I create a  
pile-up :-)



The antenna is a homebrew two element delta loop, rotatable, with which I've had very good results. I'll be running a full QRP gallon from a modified TS-440S. I don't know about the latest development of condx on 17m, but last year when the band was in reasonable shape, I managed a statesite SSB QSO with my first holler at 0.95 watts (see that, Chuck?) and got a 55 report.

I'm at the home QTH - where my 'big' antenna is - only every few weekends, so don't miss the chance! ;-)

Take care

72

Richard Hieber, DL8MFQ/AA8CP, in Erlangen, Germany  
sz0026@daphne.rrze.uni-erlangen.de

From owner-qrp-l@netcom.com Sat Mar 11 06:02:20 1995  
From: K7YHA@aol.com  
Date: Fri, 10 Mar 1995 17:46:59 -0500  
Message-Id: <950310174521\_45631762@aol.com>  
Subject: Fwd: TS-130V Station For Sale

Unfortunately the first posting had the price incorrect. The cost of my entire TS-130V QRP station is \$1100, not \$1000 (as stated in a sentence near the end of the posting.

The first certified bank draft or money order for \$1100 takes the gear.

72 rich

-----

Forwarded message:

Subj: TS-130V Station For Sale  
Date: 95-03-10 17:15:50 EST  
>From: K7YHA  
To: qrp-l@netcom.com  
CC: K7YHA

The IRS strikes again! I have the following Kenwood QRP gear for sale:

TS-130V Transceiver--SSB/CW 80-10 mtrs including WARC. 10 Watts Output in CW/20 Watts Output PEP SSB. 2.4KHz/1.8KHz SSB IF Xtal filters, 500 Hz CW IF Xtal filter installed. Rig has built in speech processor. Excellent audio quality on SSB. Semi-break in on CW.

DFC-230 Digital Frequency Controller--allows remote control of TS-130. Provides 4 memory chnls, user programmable. Basically, this is a digital VFO that can be used for mobile or base applications. It functions much like the VFO-120 in that it can control the transceiver or offer split mode operation

as well as RIT, plus it has an audio line and the ability to control the transceiver using an 8-pin Kenwood mic with up/down buttons. (This is a VERY RARE Kenwood accessory)

VFO-120 Analog VFO--matches TS-130 styling, provides split mode operation as well as full control of transceiver and RIT.

AT-130 Antenna Tuner and SWR/Power meter--80-10 meter (including WARC) band coverage for coaxial fed antennas.

PS-20 AC Power Supply--dual voltage input (110/220 VAC) power supply that provides power to TS-130 and accessories.

Price: \$1100 and I ship.

All equipment is in primo mint condition, just like it came out of the box from Kenwood. All manuals included including the service manual for the TS-130V. This gear is collector quality.

The first certified bank check or money order for \$1000 takes it all.

If you are interested, CALL.....DO NOT LEAVE E-Mail....(717) 825-5395. I am home AFTER 9PM Mon-Thrus, after 5PM on Fridays, and all day on the weekend.

72 rich

From owner-qrp-l@netcom.com Fri Mar 10 18:00:37 1995  
Date: Fri, 10 Mar 1995 08:21:42 -0500 (EST)  
From: prvalko <prvalko@cliff.acs.oakland.edu>  
Subject: Re: Hello  
Message-Id: <Pine.3.89.9503100858.A8957-01000000@saturn.acs.oakland.edu>

On Thu, 9 Mar 1995, Bob Levine wrote:

> New subscriber testing connection.  
> Thanks,  
> Bob

welcome... now tell us about yerself and your QRP gear!

73 =paul= wb8zjl

From owner-qrp-l@netcom.com Sat Mar 11 04:46:27 1995  
From: Robert6478@aol.com  
Date: Fri, 10 Mar 1995 14:08:48 -0500  
Message-Id: <950310113121\_45303849@aol.com>

Subject: Index Labs QRP+

Thank you everyone for the many responses to the getting started again post. I think I will enjoy returning to radio. The HW-7 I mentioned may still make it on the air.

I'm interested in three more tidbits.

Of all the monoband kit rigs, which one is the most compact, yet still quite buildable? I'm interested in having something along for canoe trips.

Long wire versus vertical for 40-10m, any suggestions? I have an old vertical I was given, but it may need some help.

If I wanted the QRP+ rig from Index Labs, who sells them?? I didn't find any adress in the postings, or at think.com.

thanx,

Rob

KA0GZO

From owner-qrp-l@netcom.com Sat Mar 11 05:13:22 1995  
Message-Id: <n1417259382.4148@msmailgw1.arlut.utexas.edu>  
Date: 10 Mar 1995 19:17:49 -0600  
From: "rohre" <rohre@msmailgw1.arlut.utexas.edu>  
Subject: Kit parts identification (long)

Mike Robinson is looking for sources for the MVAM 108 varicap diode used in a particular kit.

The MV with four numbers following is used for the Motorola varicaps listed in Allied Radio's catalog, at about .74 cents each.

I am not sure if Motorola made this kit one.

One would hope that kit manufacturers would reveal the sources of any parts that are the less common than "standard" items that one finds at local distributors, and Radio Shack (Tandy). I would not want a kit supplier to waste my time and his if he has general purpose ceramic disc caps that are legibly marked as such in his kit; but I would sure want to know the information that is needed to find more than one source for such unique items as the tuning components, or specialized chips such as the Curtis chip in a keyer. ( BTW, I see Mouser has Curtis keyer chips.)

Unfortunately, in the history of kits we see all the way back to the early Heath kits that industrial or military surplus was the parts foundation which made the

kits economical. There are some items that are common only from the kit originators, and we can hope they stay in business in case we need a replacement someday. However, given the economic realities of electronics, I would appeal to designers to pick components that can be matched world wide rather than very obscure, or particularly North American components, or at least research what the equivalents that would work and are available in Europe and Asia and Australia, New Zealand, and Africa, Central and South America or wherever.

For the education of any kit designers that read this and do not know this; luckily there historically were North American components widely used in the Western hemisphere, and the European components, widely used in Western Europe, and the British Commonwealth; thus in South East Asia, I could easily go to a local distributor of electronic parts and find British and German semiconductors, and components. The Radio Spares lines of parts were easily found in Malaysia, half the world away from Britain. Many semiconductors would substitute from one continent to another, an AF139 transistor would work in a circuit that had used a 2N711B. This is fine, as long as the kit builder is given some guidance on the parameters of importance so a substitute can be found if the original part becomes unavailable or obsolete. I think you find throughout Asia still this mixture of international components. I do not know what the current situation is in Europe with the recent opening of the Eastern countries; but I do know Spain has a strong components industry, and old companies with fine products like Tesla survived in the Eastern European area. The Russian market developed its own components and tube types in addition to a few western ones that were needed for imported equipment. But, until so much manufacturing in North America moved to Asia, there were not that many differences in components throughout the world. An electrolytic in Germany of a particular type is about the same as one from Kemet in the U.S.

I would hope equipment designers not just of ham kits, but other products in electronics will keep the world market that is growing, in mind; and take pity on the poor person who someday has to replace the shiny part that started out in the circuit when the smoke is finally let out. (You know do you not, that all electronics failures are attributed to letting the smoke out?) Give enough information in the parts list for anyone to substitute or duplicate the functions of the part, if not the exact component.

If anyone wants to send me radio parts catalogs from other countries, I would like to study this problem to perhaps identify a common parts list, and report to the QRP-l. Perhaps if you also have knowledge of British and European components such as the Radio Spares line, you can simply email me how alike local components are to those with which I have knowledge from the British Commonwealth, or Hong Kong, Taiwan, etc.

If anyone can mail me some recent catalog, it can be sent to: Stuart M. Rohre, CSD, ARL, Box 8029, Austin TX 78713-8029, U.S.A. Thanking you in advance for the use of bandwidth for this,  
72, Stuart K5KVH

From owner-qrp-1@netcom.com Fri Mar 10 16:01:16 1995  
From: RobCap@aol.com  
Date: Fri, 10 Mar 1995 12:48:39 -0500  
Message-Id: <950310104721\_45270173@aol.com>  
Subject: Lead in Solder: Blood Test Result

Some of you may have seen my inquiry about the health risks associated with lead and flux in solder.

I had many useful replies, the most detailed of which was sent by Jeff Shelton, which is provided below.

Well, as it happens I had an appointment to get my 3-year physical, which included a blood test. While I was at it anyway, and at very little additional expense, I asked my Doctor to check the levels of lead in my blood.

The Doctor was not at all concerned about my exposure to lead, but was happy to run the test. He explained that the "normal" lab result range is a reading from 0 to 39. At 80, the lead levels are considered toxic. My lab result was 2.

Naturally, this is not a big scientific study of 1000 people. It's a statistical sample of 1, so should not be considered a scientific "finding". Rather, I am posting my personal experience for people's interest. I do a fair amount of building, and my normal practice is to wash up after a long session of building.

Now, let's not discuss all of the other tests they did in my 3-year physical. It gets nasty. (Let's just say they checked all of the fluid levels and looked "under the hood", and leave it at that).

Jeff's posting follows.

73,

Rob

Here is Jeff Shelton's Posting:

"Bob,

I used to be an industrial hygienist at the Naval Surface Warfare Center in Dahlgren, VA - they do lots of electronics work, use lots of solder of various types. We took lots of air samples for lead. We \*NEVER\* had an air sample from ordinary electronics soldering come back high enough to worry about - they were nearly always "below detectable

limits", even without special efforts at ventilation. A standard electronics soldering iron doesn't heat the lead up enough to vaporize a significant amount (the smoke you see is from the rosin core burning, not the lead).

Note that plumbing type "soldering" with a torch is very much another thing! Plumbers and welders doing soldering/brazing with torches can and do get overexposed to airborne lead. Also, as some of the other folks here have noted, ingestion of lead oxides from solder is more likely to be a source of exposure for electronics hobbyists. The precautions here are pretty much common sense - don't contaminate your food, keep your hands away from your mouth when soldering & wash up afterward, don't solder in an area frequented by small children, etc. Lead-free solder seems unnecessary if you're reasonably careful.

Rosin does give off some formaldehyde when it burns, but so do many other things, including animal fats (i.e., if you burn the drippings from a steak, you'll release small but measureable amounts of formaldehyde). We never tried to measure formaldehyde from rosin-core solder, but I'd be surprized if it was a major hazard for most people. Some folks, though, are genuinely allergic to burning rosin-core; some asthmatics have quite a lot of trouble. For these folks, soldering could be a real health hazard.

Hope this rambling was of some value - Jeff (Shelton)"

From owner-qrp-l@netcom.com Sat Mar 11 02:16:07 1995  
Date: Fri, 10 Mar 1995 17:38:59 -0700 (MST)  
From: Rick Zabrodski <zabrodsk@med.ucalgary.ca>  
Subject: Re: Lead in Solder: Blood Test Result  
Message-Id: <Pine.SUN.3.91.950310173042.3424A-100000@ume>

One of my many hats is that of "occupational health advisor" to the local manufacturing plants of Northern Telecom here in Calgary. They buy and use large quantities of solder making telephones and high tech digital wireless systems. Lots is done in wave soldering machines these days (mostly surface mount technology in the fancy stuff). However, some things still need to be done real people with real solder. We are talking several thousand employees, daily exposure or 10 plus years. We stopped routine screening years ago because we never found anybody positive or even borderline. Only problem is with those sensitive to the chemical or with significant asthma. Bottom line.....not a problem. I wish I could say the same for repetitive strain injuries.....then again, I would not have a job either!

\*\*\*\*\*

Dr. Rick Zabrodski BSc, MD, CCFP(E)                   \*                   VE6GK  
Email: zabrodsk@med.ucalgary.ca                   \* NorCal 519   ARCI 7099   GQRP 8329  
Phone 403-271-5123 Fax 403-225-1276           \* "Power is no subsitute for skill"  
\*\*\*\*\*

From owner-qrp-l@netcom.com   Fri Mar 10 13:14:24 1995  
Message-Id: <9503101600.AA27121@ig1.att.att.com>  
From: mvjfm@mvubr.att.com (James M Fitton +1 508 960 2577)  
Date: 10 Mar 95 10:56:00 -0500  
Subject: Meeting

QRP-NE Luncheon Meeting - Tomorrow   3/11/95

QRP-NE will hold a lunch time meeting tomorrow at the  
Host Hotel in Boxboro, MA,   at 12:00 noon.

Tel.   508 263 8701

Bring home brew equipment to show and tell.

Carpool ?

I drive from Salem NH via US Rt.93   Exit 1, to   Rt.495 into Boxboro.

See you there... 72,

Jim Fitton, W1FMR                   603 898 6188 H,           508 960 2577 W.

From owner-qrp-l@netcom.com   Sat Mar 11 03:59:27 1995  
Message-Id: <199503102325.SAA06487@jfw@home.funhouse.com>  
Subject: Re: Meeting  
Date: Fri, 10 Mar 1995 18:24:44 -0500  
From: "John F. Woods" <jfw@jfw@home.funhouse.com>

I hope this doesn't go out too late to benefit anyone who needs it.

The Boxborough Host Hotel is now a "Holiday Inn".

I hope I'll see you all there.

From owner-qrp-l@netcom.com   Fri Mar 10 16:30:50 1995  
From: jpo@acd4.acd.com ( Jim Osburn                   )  
Message-Id: <9503101311.AA03343@IEDV5.acd.com>  
Subject: Passive CW Filter, Audio Filters, RS Crossover

Date: Fri, 10 Mar 95 8:11:38 EST

I want to thank everyone who responded to my post about the passive CW filter made from a Radio Shack crossover.

The W3NQN filter is highly recommended.

I'm going to have to check it out.

The Radio Shack crossover is not the way to go.

Thanks,

Jim, WD9EYB

From owner-qrp-1@netcom.com Fri Mar 10 15:31:38 1995

Message-Id: <9503101611.AA01585@ig1.att.att.com>

From: mvjfm@mvubr.att.com (James M Fitton +1 508 960 2577)

Date: 10 Mar 95 11:07:00 -0500

Subject: QRP-NE on Sunday !!!!!

000PS !

Change meeting date to 3/12..... Sunday

-----  
And:

Dont forget to send your photos and articles for "72"  
to Dennis now; If you cannot make the meeting on Sunday.  
-----

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Jim Fitton, W1FMR            603 898 6188 H,            508 960 2577 W.



From owner-qrp-1@netcom.com Fri Mar 10 19:27:03 1995  
Date: Fri, 10 Mar 1995 10:08:07 -0800 (PST)  
From: H Smith <hbs@crl.com>  
Subject: Re: QRPing the TS-50  
Message-Id: <Pine.SUN.3.91.950310095949.23011A-100000@crl3.crl.com>

On Thu, 9 Mar 1995, Brogdon, Al, K3KMO wrote:

>  
>  
> Since I use a TS-50, I thought it would be nice to reduce the rig's  
> low-power output from the preset 10 watts to 5 watts, to participate in the  
> QRP division of some contests. Lo and behold, it's duck soup!  
>  
> ... etc ...  
>  
> After adjusting the low setting to 5 watts, the three power levels on  
> my TS-50 are now 5, 25, and 50 watts (rather than the original 10, 50, and  
> 100 watts). Aw right!  
>

Notice that the adjustment above will change all three of the power outputs. And yes, you can boost the high power to over 200w if you dare.

The low and medium power settings can be changed independently. My TS50 is set up for a low power output of 5w, medium power output of 50w and high power output of 100w.

I have included the mod below for those who might be interested.

CUL,

Smitty, NA5K

-----  
If you check the schematics, you will see on the TX/RX board two potentiometers to set the Low 10 watt (pot VR15) and Medium 50 watt (pot VR16) power levels. The high power level is fixed at 100 watts by resistor R214. We want to get to VR15 and set it for 5 watts. Note that VR15 and VR16 are not interactive. Changing the low power setting does not change the medium (or hi) power setting and vice versa.

First remove the top cover, set aside the speaker and remove the latched speaker bracket (gives you better operating room).

Locate two teeny-weeny pots next to the IF filter module in the middle of

the TX/RX board. The pot closest to the front panel is VR15 (low power adjust) and the one closest to the back of the rig is VR16 (medium power adjust). The pots are somewhat marked on the PC board.

Kenwood sez that their automatic antenna tuner needs 10 watts to actuate so this adjustment may affect the AT operation.

The rig will draw about 4 Amps at 5 watts.

From owner-qrp-l@netcom.com Sat Mar 11 04:55:48 1995  
Date: Fri, 10 Mar 1995 11:17:38 -0330 (NST)  
From: Bob Gobrick V01DRB/WA6ERB <bgobrick@terra.nlnet.nf.ca>  
Subject: Re: QRPing the TS-50  
Message-Id: <Pine.OSF.3.91.950310111101.4699A-1000000@terra.nlnet.nf.ca>

Hi Al,

I wrote an article many moons ago called "Honey I shrunk the Rig" (little dated now) dealinbg with the TS-50 qrp mods. Two comments for those doing the "power turndown":

1. I believe that if you are using the matching TS-50 automatic antenna tuner you may have a problem since that unit requires a minimum 10 watts to operate. I am not sure if the TS-50 triggers the low power circuit to do this.

2. Also I read (not verified) if you are using a low power wattmeter (OHR etc) be careful when tweaking the power pots on the TS-50. I was told (not verified) that as you approach low power (0 watts) that the pot reverts to full scale power 100 watts. That will do wonders for your OHR set at 1 watt - hi.

Enjoy rig - I had mine for about 3 months but aI couldn't stand the IF blow-by on the filters. Since then International Radio (QST in FL) has come out with an 8 pole IF filter mod for the TS-50. That will probably do the trick since the miserable ceramic filter Kenwood installed leaves a little bit to desire.

72 bob V01DRB/WA6ERB

-----  
Bob Gobrick V01DRB/WA6ERB/VE2DRB Newfoundland, Canada

QRPer Galore - ARCI, GQRP, NORCAL, NEQRP, COQRP, MIQRP, NWQRP

Internet:       bgobrick@terra.nlnet.nf.ca  
              rgobrick@public.compusult.nf.ca

Compuserve:    70466.1405@compuserve.com

-----  
From owner-qrp-1@netcom.com Sat Mar 11 02:54:39 1995  
From: rohrwerk@holonet.net  
Date: Fri, 10 Mar 1995 20:40:55 -0800  
Message-Id: <199503110440.UAA09667@holonet.net>  
Subject: R2 and level 17 mixers...

Verily hath JimN00CT@aol.com written:

> A friend who is not on the QRP-List asked if there would be any  
> degradation or negative change in performance if he switched out the  
> SBL-1's in his R2 with level 17 mixers (those requiring 50 mW of  
> drive, as opposed to the 5 mW required by the SBL-1) with the same  
> pinouts. He wants to build a receiver with high immunity to local  
> strong signals.

Should be absolutely no problem -- Rick talked about this in the R1 article.  
Assuming that the real limiting factor in dynamic range is indeed the mixers  
and not the preamps.

Interesting sideline: I just read in Hayward's "Solid State Design" (page 119):

"A good rule of thumb is that the output intercept of simple rings is roughly  
equal to the level of LO power applied."

Now, other variables might enter in -- diode current capabilities or  
transformer saturation. But I'll bet you can just jack up your drive with a  
standard +7 mixer and get at least some increase in output intercept.

: John Seboldt rohrwerk@holonet.net / I am Bach of Borg...  
: Amateur radio K0JD... / your style will be  
: Church of the Annunciation, / assimilated.  
: Minneapolis /

-> Alice4Mac 2.3 E QWK Eval:05Mar94

From owner-qrp-1@netcom.com Sat Mar 11 04:46:55 1995  
Date: Fri, 10 Mar 95 08:13:02 -0600  
From: adams@chuck.dallas.sgi.com (chuck adams)  
Message-Id: <9503101413.AA19032@chuck.dallas.sgi.com>  
Subject: Re: Re K5FO "swipe"

Mike et.al.,

Thanks to Mike and in other email he made clear that he wasn't aiming anything at me and I personally and in public apologize for my reaction to his posting. I was in a rather stressed state at the time.

No hard feelings and the entire matter is past and forgotten. I will not bring it up any more.

Thanks Mike.

I will post a new summary on the awards. I had made a preliminary table outlay in a previous post and I've been working on teaching full time this week for a new course for which I did not get the materials until Monday morning, thus I've been not getting any sleep this week. :-) Just like any other week. :-)

I was up at 3 a.m. this morning and starting filling in the table when I discovered a numbering error made back in the early 1960's. This delayed things while I double checked all the numbers. I have a new set about ready, but gotta finish the class today, so stand by please. Operators are standing by.....

dit dit

Chuck Adams K5FO CP-60 adams@sgi.com

From owner-qrp-l@netcom.com Fri Mar 10 23:09:54 1995  
Message-Id: <199503102335.PAA04312@holonet.net>  
Subject: Re: Schematics via inet  
Date: Fri, 10 Mar 95 15:35:12 PST  
From: John Seboldt <rohrwerk@holonet.net>

Re PS Screen viewing... Yes, GhostScript is an option, but boy, I had lots of problems with the Mac port of it, and someone told me that his Windows version choked on one of my files, although it printed out fine on an HP printer.

I have wondered if EPS (Encapsulated PostScript) would not be an option? This is used for graphics to be placed into a document, such as a page layout program. Advanced word processors can place and display these (Mac does, PC/Windows also?), or a page layout program, or various other options (my version of Filemaker Pro will do it!)

John K0JD  
rohrwerk@holonet.net

From owner-qrp-1@netcom.com Fri Mar 10 17:51:27 1995  
From: "RICHARD HIEBER" <SZ0026@daphne.rrze.uni-erlangen.de>  
Date: Fri, 10 Mar 1995 16:15:24 MET  
Subject: Sri Lanka Club  
Message-Id: <73E277B5D@daphne.rrze.uni-erlangen.de>

Hi gang,

via Packet Radio I received a message from Sri Lanka which I'd like to forward to the list. Judge for yourself.

Richard Hieber, DL8MFQ/AA8CP  
sz0026@daphne.rrze.uni-erlangen.de

-----  
4S7MR > HELP 08.03.95 23:00 37 Lines 1350 Bytes #90 @WW  
BID : 6438\_4S7NR  
Subj: To Start a QRP Club  
Path: !DB0SIF!DB0AIS!DB0SAO!DB0RBS!DB0MWS!DB0AAB!DB0PV!DB0MFG!OE7XCI!IW3AQL!  
!IN3TUR!IK4NZD!IK4MGV!I4EUM!I4FP!I3KRW!IV3AVQ!IW3QQV!IW3GS!IK6RUY!  
!I6BNW!RW6AT!RV6ATZ!A45Z0!AP2TJ!VU2SJV!4S7NR!  
Sent: 950302/0715Z @:4S7NR.#CMB.LKA.AS #:6438 [Colombo] FBB5.15c \$:6438\_4S7NR

>From: 4S7MR@4S7NR.#CMB.LKA.AS  
To : HELP@WW

4S7MR CLUB STN  
MAHANAMA COLLAGE,  
DEAL PLACE,  
COLOMBO 3,  
SRI-LANKA.

19-FEB-95.

Dear READERS,

We have received our new club call sign recently, and we wish to home brew our whole station, and hope to start a QRP club in 4S7. We have already started some QRP projects, including a IARU 20m 4W CW X'tal ctrl GoodWill Transceiver and a 40m 7W CW/AM transmitter using DB139 audio transistors as PA.

In Sri-Lanka it is difficult to find, toroid cores, and RF power Transistors, PCBs of Kits like that. If you like to give us a helping hand, please send us your junked transceiver boards (where we can get some good parts), ham radio kits, or what ever things you think will helpful to us. Details of places where they sell low cost hamradio kits and there prices, A old XT or 286 mother-board are few other things we look for!

If you have something, please do drop us a line, or send a msg.  
Thanking you,

Students of  
4S7MR

4S7MR @4S7NR.#CMB.LKA.AS

From owner-qrp-1@netcom.com Sat Mar 11 04:45:43 1995  
From: "Doyle, Ron" <doyler@uh2297p01.daytonoh.NCR.COM>  
Subject: SSB Fox hunt Sched For March 14  
Date: Fri Mar 10 08:00 EST 1995  
Message-Id: <2F604D12@sdwinb.daytonoh.ncr.com>

This could get interesting. I have a Cub Scout Pack meeting that night (I'm the Cubmaster) but should be home by 8:30pm. Turn the radio on to warm up, get the kids to bed, and be on by 9:00pm. If I sound out of breath I probably am.

I will be on the air to meet the challenge of all you "screaming QRPers". Name here is Ron, N8VAR in Huber Heights, Ohio, near Dayton. I hope to use a Heathkit SB-401/SB-303 pair if possible or a TS-430s turned down to 5 watts. The antenna will be a multi-band Dipole fed with coax, The feed point is at 20 ft. and the ends drooping to about 6 to 7 feet. Not ideal but functional.

I will QSL 100% to my address - SWLs encouraged to QSL also!

Here's the sched:

[ SSB QRP FOX HUNT: Tuesday March 14. ALL TIMES ARE EST ]

09:00pm - 09:30pm 7.225 - 7.230 NO LOWER  
09:30pm - 10:00pm 7.210 - 7.220  
Band switch time.  
10:00pm - 10:30pm 3.780 - 3.788  
10:30pm - 11:00pm 3.905 - 3.910

I may go just a tad lower if I can't find any holes but only as a last resort.

My address is:

N8VAR Ron Doyle  
6105 Sandbury  
Huber Heights, OH 45424

From owner-qrp-l@netcom.com Fri Mar 10 23:55:37 1995  
Date: Fri, 10 Mar 1995 15:03:17 -48000  
From: "David D. Meacham" <ddm@datatamers.com>  
Subject: Re: starting on Norcal 40a  
Message-Id: <Pine.3.89.9503101400.A14719-0100000@dt1.datatamers.com>

Matt, Re solder type... I use and recommend "Electronic Silver Solder", alloy Sn62, 0.020-inch diameter, by Kester. I buy it at Fry's, a local computer store. This stuff wets wires and solder pads better than ordinary solder. 72, Dave, W6EMD.

From owner-qrp-l@netcom.com Sat Mar 11 04:56:52 1995  
From: Byron8LCZ@aol.com  
Date: Fri, 10 Mar 1995 14:06:00 -0500  
Message-Id: <950310134329\_45412448@aol.com>  
Subject: Re: starting on Norcal 40a

Good Luck on your first kit, it will be a memorable experience.

I have been building kits since 1963 and have never heard of anyone in amateur radio using 96 tin/ 4 silver solder. I cant imagine why you would want to use this stuff. most of us use 60 tin/40 lead rosin core solder, the only thing you need to do is find a small diameter .031 inch solder since alot of those traces will be close together, and use a low wattage soldering pencil, about 25 watts.

1. i would recommend making a xerox copy of the pc board before you start assembly, so after you've soldered it, you can check the copy against the board to find any traces that may have solder bridges between them, where they dont belong. Holding the board up to a bright light makes it easy to see traces that have been bridged.

2. If you're going to change any of the connectors (such as putting a so-239 on the panel instead of a RCA Phone or BNC connector for the antenna) do it before installing the pc board. metal chips can get everywhere and cause lots of problems.

3. Be careful when installing diodes and capacitors to get the correct polarity, this alone will save you many headaches. take your time and enjoy the project.
4. Find a local kit building ham and have him check your work BEFORE putting the power on it. this step could save you weeks of time and many burned out components.
5. make copies of the board layout and use a high liter to mark components as you install them. The first kit is always the hardest, because you dont have any previous experience to relie on. the second kit will be much easier.
6. When cutting excess resistor and capacitor leads off the board after soldering, wear glasses to keep the flying leads out of your eyes.
7. Wash your hands after handling solder, dont eat while soldering. Lead oxide on the outside of the solder gets on your hands, if you eat, it gets in your stomach. Once you get lead inside of you, it stays there, forever. Thats the only hazard with soldering as far as i know.
8. Enjoy ! This is amateur radio at its finest. Working someone with a transceiver you built yourself is very satisfying. Like catching a trout with flies you've tied yourself.

72, Byron WA8LCZ

From owner-qrp-l@netcom.com Sat Mar 11 06:01:22 1995  
From: negaard@draagen.graceland.edu  
Date: Fri, 10 Mar 1995 10:17:32 -0600  
Message-Id: <199503101617.KAA04879@draagen.graceland.edu>  
Subject: Re: starting on Norcal 40a

>>>> "mtrail" == mtrail <mtrail@violet.berkeley.edu> writes:

mtrail> Hi, all Well, I actually received my kit in the mail LAST  
mtrail> Friday--and haven't gotten around to counting the parts until  
mtrail> tonight. Everything is there and it looks like it's going to  
mtrail> be a blast putting it together! Especially since this is my  
mtrail> first kit!! I plan to set the record for the LONGEST, most  
mtrail> painstaking job... I've got a few naive questions for all you  
mtrail> experienced builders out there. The first one involves  
mtrail> solder--I read AA7AR's advice in the latest issue of QRPp, and  
mtrail> also see that the manual mentions trying to find silver  
mtrail> solder. I've picked up some rosin-core 96% tin 4% silver--is  
mtrail> that the right stuff? (that's the only proportion I find  
mtrail> mentioned in the Handbook as well...)



I've never built a kit (just waiting for a fiscally opportune moment!), but I did a lot of electronic repair in the US Navy, even attending the miniature and microminiature repair school, and basically that sounds like a lot of tin. I don't know about silver solder, but if you were using standard solder, the proportions should ideally be 63% to 34%. The reason is that solder with that ratio will turn from a solid directly to a liquid (and vice versa) as it hits its melting temperature.

```
mtrail> [no further assistance to give, alas]
mtrail> I'll let you all know how easily a basically "Neophyte"
mtrail> builder finds this...but I have a feeling I've already caught
mtrail> the bug...
```

Yes, I'd like to know how it goes. This is one way I may go to get up on HF...though maybe not with the NorCal 40a (they're all gone, right?)

```
mtrail> "I should be finishing my dissertation."
```

I should be shopping for a life... ;->=

--

o David Negaard	o negaard@graceland.edu
o Help Desk Technician	o <a href="http://www.graceland.edu/~negaard">http://www.graceland.edu/~negaard</a>
o 700 College Avenue	o linux-phile
o Lamoni, IA 50140	o 73 de KB0PXX

From owner-qrp-l@netcom.com Fri Mar 10 18:39:25 1995  
Date: Fri, 10 Mar 1995 07:54:00 -0500  
From: "david (d.) burniston" <davidgb@bnr.ca>  
Message-Id: <"2742 Fri Mar 10 07:55:09 1995"@bnr.ca>  
Subject: Re: Super T Tuner (was: More Happy Faces...)

```
>
>>Super T
>> tuner kit from Kanga US finished in time).
>>
>> See ya ...
>>
>> Dave
>> VE3LFO          ***All Opinions Are My Own *****
>>
>
>Dave,
>
>What is this tuner? And how much?
>
```

>Thanks, Ron  
>  
>.....KU7Y.....Monte "Ron" Stark.....  
>....ku7y@sage.dri.edu.....Sun Valley, Nevada....  
>.....ARRL.....NorCal #330.....NRA LIFE.....  
>  
>

The Super T tuner was featured in SPRAT and also re-printed in the first issue of QRPp (I think it was the first issue). It uses switched coils and a 365pF variable and supports balanced and unbalanced feedlines. Cost from Kanga US for kit of parts (no case) is \$20 US plus shipping.

I'm adding a resistive bridge SWR meter to it and hope to package it about the size of the NORCAL40.

... Dave  
VE3LFO

From owner-qrp-l@netcom.com Sat Mar 11 05:30:24 1995  
From: mtrail@violet.berkeley.edu  
Date: Fri, 10 Mar 1995 20:15:47 -0800 (PST)  
Subject: Thanks for hints!  
Message-Id: <Pine.3.89.9503102027.C5519-01000000@violet.berkeley.edu>

Hi, gang

Thanks for all the terrific hints and comments regarding getting started on the Norcal 40a!

If consistency is the hobgoblin of little minds, the i-net group in collective terms is pretty much a "big brain"! That is, there are all sorts of opinions out there on solder...but the bottom line is that you can't go seriously WRONG with the basic rosin core 60/40 or 63/37 blends. People seem to be a bit more ideological when it comes to silver solder, it seems...

Anyways, a collective thanks to all who responded. I promise you'll hear from me some more as the fumes start rising...

Matt KN6CR

From owner-qrp-l@netcom.com Fri Mar 10 14:11:08 1995  
Date: Fri, 10 Mar 95 09:28:46 MST  
From: miker@cc.com (Mike Robinson)  
Message-Id: <9503101628.AA26267@cc.com >

Subject: The elusive varactor

Can someone give a good source for the elusive  
MVAM108. This is the varactor used in the Norcal40.

```
=====
7.3 de Michael aa0ub | QRP: Am I getting out?
miker@cc.com         | My neighbors have stopped complaining.
=====
```

From owner-qrp-l@netcom.com Sat Mar 11 06:01:18 1995  
Date: Fri, 10 Mar 1995 15:38:57 -0800 (PST)  
From: Monte Stark <ku7y@sage.dri.edu>  
Subject: Re: The elusive varactor  
Message-Id: <Pine.SUN.3.90.950310152630.17424A-100000@nimbus>

On Fri, 10 Mar 1995, Mike Robinson wrote:

```
>
> Can someone give a good source for the elusive
> MVAM108. This is the varactor used in the Norcal40.
>
```

Newark Electronics catalog #113 has them for \$0.98 ea.

I just ordered a doz. Of course by the time you add  
shipping, cod and tax the price goes up a bit!

I have one at home. (I think that's what came with the  
mini 40 kit). If you need one quickly I would be happy  
to send it to you.

73's, Ron

```
.....KU7Y.....Monte "Ron" Stark.....
....ku7y@sage.dri.edu.....Sun Valley, Nevada....
.....ARRL.....NorCal #330.....NRA LIFE.....
```

From owner-qrp-l@netcom.com Sat Mar 11 04:35:01 1995  
From: K7YHA@aol.com  
Date: Fri, 10 Mar 1995 17:14:35 -0500  
Message-Id: <950310171435\_45601611@aol.com>  
Subject: TS-130V Station For Sale

The IRS strikes again! I have the following Kenwood QRP gear for sale:

TS-130V Transceiver--SSB/CW 80-10 mtrs including WARC. 10 Watts Output in CW/20 Watts Output PEP SSB. 2.4KHz/1.8KHz SSB IF Xtal filters, 500 Hz CW IF Xtal filter installed. Rig has built in speech processor. Excellent audio quality on SSB. Semi-break in on CW.

DFC-230 Digital Frequency Controller--allows remote control of TS-130. Provides 4 memory chnls, user programmable. Basically, this is a digital VFO that can be used for mobile or base applications. It functions much like the VFO-120 in that it can control the transceiver or offer split mode operation as well as RIT, plus it has an audio line and the ability to control the transceiver using an 8-pin Kenwood mic with up/down buttons. (This is a VERY RARE Kenwood accessory)

VFO-120 Analog VFO--matches TS-130 styling, provides split mode operation as well as full control of transceiver and RIT.

AT-130 Antenna Tuner and SWR/Power meter--80-10 meter (including WARC) band coverage for coaxial fed antennas.

PS-20 AC Power Supply--dual voltage input (110/220 VAC) power supply that provides power to TS-130 and accessories.

Price: \$1100 and I ship.

All equipment is in primo mint condition, just like it came out of the box from Kenwood. All manuals included including the service manual for the TS-130V. This gear is collector quality.

The first certified bank check or money order for \$1000 takes it all.

If you are interested, CALL.....DO NOT LEAVE E-Mail....(717) 825-5395. I am home AFTER 9PM Mon-Thurs, after 5PM on Fridays, and all day on the weekend.

72 rich

From owner-qrp-1@netcom.com Fri Mar 10 23:51:45 1995

Date: Fri, 10 Mar 95 08:03 GMT

From: oddjob@cix.compulink.co.uk (Stephen Walters)

Subject: Two electronics questions

Message-Id: <memo.956191@cix.compulink.co.uk>

Two electronics questions

In the april ed of Practical wireless there is a circuit for a xtal controlled, 1 transistor tx based on a 2n2222 (Borrowed from WiFB's note book..). Can anybody suggest what would happen if this was replaced with a Hitachi 2sc681a?

Secondly, does anybody know what UDN2949Z'S ARE? they look power trans or



> See:  
> ARRL Handbook, 1993 Edition, page 28-1.  
>  
> QST, December, 1980 and feedback, QST, January, 1981, pg. 43.  
> Ham Radio, April, 1981  
> Radio Handbook, 23rd edition, W. Orr, pg. 13-4.  
>  
> Forget the Radio Shack crossover network. Check out this article.  
> These  
> filters are computer designed and have been built by numerous hams and  
> described in QRP literature.  
>  
> You're gonna like it a lot!  
>  
> Ed Manuel - N5EM  
> n5em@aol.com  
> Houston, Texas  
>  
> QRP - Its a state of mind, not just a power level.  
>  
> QRP ARCI #4914, G-QRP #1243, NORCAL #498  
> (And soon to have a CQC number as well - couldn't resist their patch.)  
>

From owner-qrp-1@netcom.com Sat Mar 11 02:14:00 1995  
From: K7YHA@aol.com  
Date: Thu, 9 Mar 1995 05:59:50 -0500  
Message-Id: <950309055948\_44035140@aol.com>  
Subject: unsubscribe

unsubscribe qrp-1

From owner-qrp-1@netcom.com Sat Mar 11 05:16:11 1995  
From: TXREP@aol.com  
Date: Fri, 10 Mar 1995 11:47:49 -0500  
Message-Id: <950310100839\_45242711@aol.com>  
Subject: unsubscribe

unsubscribe